

Application No. 10/081,478  
Amdt. Dated October 12, 2004  
Reply to Office Action of April 27, 2004

### **REMARKS/ARGUMENTS**

#### **1. Remarks on the Amendments**

The specification has been amended to correct clerical errors.

New Claims 11-20 have been added.

Claims 2, 5 and 9-10 have been canceled without prejudice. More specifically, Claims 2, 5 and 9 become redundant after amendment of Claim 1.

Claims 1, 3-4 and 6-8 have been amended to more specifically define Applicants' claimed invention, and to obviate the objections to Claims 6 and 7.

It is noted that Claim 4 has been amended to more clearly define the thickness of the membrane. The same amendment has also been made in the last paragraph of page 10. Antecedent basis of the amendment can be found in the first paragraph of page 10.

Antecedent basis of the terms "soft tissue side" and "hard tissue side" in the new claims can be found on page 11, lines 1-2.

Antecedent basis of Claims 17-20 can be found in the Specification as filed, particularly on page 13.

Applicants respectfully submit that no new matter has been added by the amendments of the claims.

Total of 16 claims are pending. Therefore, there is no additional fee due for the new claims.

#### **2. Response to the Objection to the Specification**

The descriptions relating to the dimension of the upper surface, three natural polymers and the weight of biodegradable materials in original Claims 5, 6 and 7 have been incorporated into the specification, as suggested by the Examiner. Since the claims as filed are part of the written description, Applicant respectfully submits that such incorporation does not introduce new matters.

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### 3. Response to the Objection to the Drawings

The Examiner considers that the drawings fail to show "definable center 20" as described in the specification. Applicant respectfully points out that Fig. 6 does show the marking of "definable center 20", which is consistent with the description on page 12, lines 1-2 of the second paragraph.

Furthermore, Figs. 6 and 8 have been amended to add markings for the bone defect 19 which was missing in the drawings. Antecedent basis for this amendment can be found on page 12, lines 1-2 of the second paragraph, and on page 13, the first paragraph.

Moreover, the marking for the lower surface 14 is added in Fig. 8 to be consistent with Fig. 7.

Accordingly, Applicant requests withdrawal of the objection to the drawings.

### 4. Response to the rejection of Claims 5, 6, 9 and 10 based upon 35 USC §112

Claims 6 and presumably Claim 1 stand rejected under 35 USC 112, second paragraph. This rejection is respectfully traversed by the amendments.

More specifically, Claim 5 has been canceled, however, the claim limitations of the canceled Claim 5 have been incorporated into amended Claim 1. The claim limitations on dimension of the grooves and ridges have been amended to more specifically define the width and height of the grooves and ridges. Antecedent basis can be found on page 12, lines 6 to 9 of the second paragraph, and Figs. 4 and 5 of the specification as filed.

Claim 6 depends on Claim 1.

Accordingly, Applicants respectfully request withdrawal of the rejection of Claims 1 and 6 based upon 35 U.S.C. §112, second paragraph.

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5. Response to the Rejections of Claims 1-10 Based Upon 35 USC §102(b)

Claims 1, 3-4, 6-8 and presumably new Claims 11-16 stand rejected under 35 U.S.C. §102(b) as being anticipated by Curtis et al (U.S. Patent No. 5,833,641). This rejection is respectfully traversed.

Claims 1 and 11 are independent claims. Claims 3-4 and 6-8 depend on Claim 1, and Claims 12-16 depend on Claim 11, respectively.

For there to be anticipation under 35 U.S.C. §102, "each and every element" of the claimed invention must be found either expressly or inherently described in a single prior art reference. *Verdegaal Bros vs. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) and references cited therein. See also *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1581, 230 USPQ 81, 84 (Fed. Cir. 1986) ("Absence from the reference of any claimed element negates anticipation."); *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). As pointed out by the court, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed and that its existence was recognized by persons of ordinary skill in the field of the invention. *ATD Corp V. Lydall, Inc.*, 159 F.3d 534, 545, 48 USPQ 2d 1321, 1328 (Fed. Cir. 1998). See also *In re Spada*, 911 F.2d 705, 708, 15 USPQ 2d 1655, 1657 (Fed. Cir. 1990).

As positively recited in the amended independent Claim 1, and in new Claim 11, Applicant's claimed an article for use in healing of wounds and repairing bone tissue defects comprises a flexible membrane which has a microgeometry on upper surface (soft tissue side) and lower surface (hard tissue side), wherein the microgeometry has a pattern of grooves and ridges which are proportioned to a cell morphology of soft tissue cells on the upper surface or the soft tissue side,

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and are proportioned to a cell morphology of bone tissue cells on the lower surface or the hard tissue side. As further recited in amended Claim 1, and new Claim 11, the grooves and ridges of said soft tissue side have a width and a height of about 2 to about 10 microns, and the grooves and ridges of said hard tissue side have a width and a height of about 8 to about 25 microns.

Applicant submits that the claimed subject matter is not disclosed, taught or suggested by the art of record. More specifically, Curtis et al fail to teach Applicant's claimed flexible membrane having the grooves and ridges on said soft tissue side with a width and a height of about 2 to about 10 microns which are proportioned to a cell morphology of soft tissue cells; and the grooves and ridges on said hard tissue side with a width and a height of about 8 to about 25 microns which are proportioned to a cell morphology of bone tissue cells for promoting bone tissue growth.

Furthermore, Applicants respectfully point out that Curtis et al fail to teach any geometry and dimension thereof suitable for bone tissue growth. In fact, teaching concerning repairing bone tissue is completely absent in Curtis et al's reference. As known to one skilled in the art, bone tissue cells are substantially different from soft tissue cells in terms of cellular composition and cell growth properties. What is suitable for soft tissue growth may not be appropriate for bone tissue growth at all. Therefore, the reference fails to anticipate or suggest Applicant's claimed invention.

Accordingly, Applicant respectfully requests withdrawal of the rejection of Claims 1 and presumably new Claim 11 based upon 35 U.S.C. §102(b).

With regard to Claims 3-4, 6-8 and 12-16, as described above, these claims are dependent upon independent Claims 1 and 11. Under the principles of 35 U.S.C. §112, 4<sup>th</sup> paragraph, all of the limitations of each independent claim are recited in its respective dependent claims. As described above, independent Claims 1 and 11 are not anticipated by the prior art of record, as such Claims 3-4, 6-8 and 12-16 are submitted as being allowable over the art of record.

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In view of the above, Applicant respectfully requests withdrawal of the rejection of Claims 1, 3-4, 6-8 and 11-16 based upon 35 U.S.C. §102(b).

It is respectfully submitted that Claims 1, 3-4, 6-8 and 11-20, the pending claims, are now in condition for allowance and such action is respectfully requested. Applicant's Agent respectfully requests direct telephone communication from the Examiner with a view toward any further action deemed necessary to place the application in final condition for allowance.

10/12/2004  
Date of Signature

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## Annotated Sheets Showing Changes

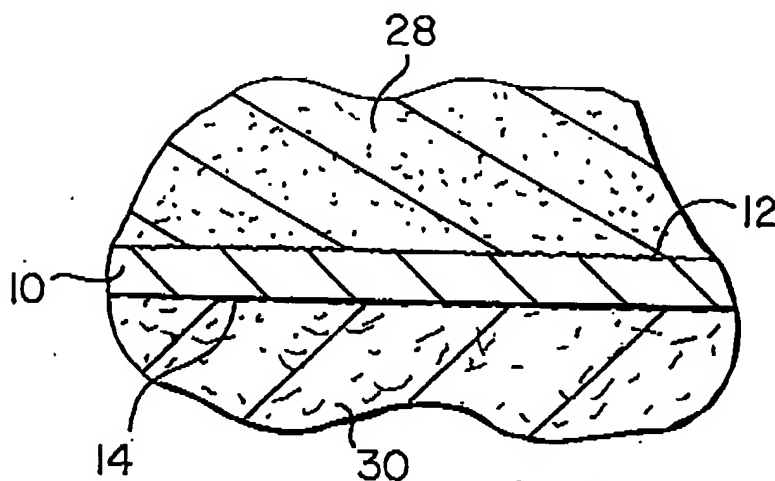


FIG. 7

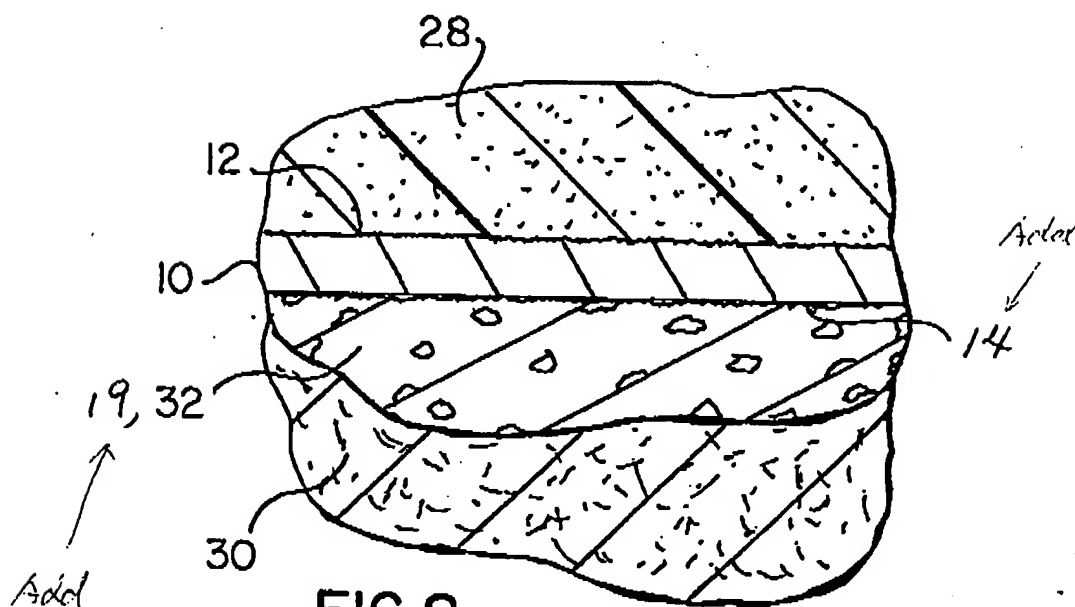


FIG. 8